IT Unit 3

Topic 1

# Organisations & Data Management

**Protecting valuable data, p 57**

1. ***Why is it important that stored data is kept secure?***Because the data may hold confidential information which must be kept private from anyone except authorised users
2. ***What are the 2 types of controls that can protect data?***Physical and software based.

Measures to protect data:

Physical equipment controls include zoned security strategies, barrier techniques and biometrics.

1. ***What is meant by biometrics and what is its advantage as a means of protecting data?***Biometrics, a form of identification and access control. Biometrics uses distinctive, measurable characteristics to describe individuals, fingerprint, face recognition, palm print, iris recognition, etc.
2. ***Backing up***
   1. ***What are the 3 types of backing up?***The three types of backing up are incremental, differential and full.
   2. ***List some backup options?***Cloud storage, external hard drive, CD, etc.
3. ***Electrical protection***
   1. ***What is the role of a UPS?***The role of a UPS is an uninterruptable power supply which can regulate electricity coming into a computer and supply backup electricity for a short time if a blackout occurs.
4. ***Usernames & passwords***
   1. ***What are the characteristics of a good password?***It must have a mixture of upper case and lower case characters, numbers, etc around 8 letters/characters, and musts be changed regularly.
   2. ***What is the role of access logs, audit trails and access restrictions?***To keep track of the database/s and log any changes made.
5. ***Systems security software***
   1. ***What types of security software should organisations run?***Organisations should run a variety of system software.
   2. ***Explain the nature of malware and phishing software***Malware (malicious software) is specifically designed to disrupt, damage, or gain authorized access to a computer system. Phishing is the fraudulent practice of sending emails purporting to be from reputable companies in order to induce individuals to reveal personal information, such as passwords and credit card numbers.
   3. ***Explain the nature of a firewall?***A firewall is used to protect a network or system from unauthorised access.
6. ***Encryption***
   1. ***What does encryption involve?***Encryption involves encoding the data to prevent interception or theft. If unauthorised access occurs the data cannot be read.
   2. ***What protocols are used for encryption?***Protocols used for encryption are SSL, TLS, and HTTPS.
   3. ***What is hashing?***Hashing is the transformation of a string of characters into a usually shorter fixed-length value or key that represents the original string.